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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,391	03/30/2001	Monte J. Rhoads	42390P11044	7361

8791 7590 05/29/2003

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

LEVI, DAMEON E

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,391

Applicant(s)

RHOADS, MONTE J.

Examiner

Dameon E Levi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Appeal Brief Paper No. 22. 03/20/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-14, 16-26, 28-50 and 52-58 is/are rejected.
- 7) ☒ Claim(s) 4, 15, 27 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION
REOPENED PROSECUTION

The arguments presented by the Applicant in Appeal Brief Paper No. 22 have been considered and are persuasive. The previous rejection is withdrawn. However, upon further examination of the claims, new considerations have been made, and hence, new claim rejections are made herein by the Examiner. By virtue of the above, prosecution of the instant application is reopened.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,5-14,16-26,28-50, and 52-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al US Patent 5754796.

Regarding claim 1, Wang et al discloses an apparatus comprising:

- a mounting portion including a first communication path to route at least one signal line from a first card connector on a circuit board to a first card connector on the mounting portion (for example, see elements 10B, 51A, 12A Fig 7)
- a routing portion including a communication path, the communication path of the routing portion to route at least one signal line from a second card connector on the circuit board to the mounting portion (for example, see element 67,68, Fig 7)

- a second communication path of the mounting portion to route the at least one signal line of the second card connector on the circuit board to a second card connector on the mounting portion (for example, see element 67, 12C, Fig 7)

Regarding claim 2, Wang et al discloses the mounting portion and the routing portion comprising a single integrated component (for example, see Figs 7, 10, 11).

Regarding claim 3, Wang et al discloses an assembly further comprising at least one other routing portion including a communication path to route at least one signal line from a third card connector on the circuit board to the mounting portion, a third communication path of the mounting portion to route the at least one signal line of the third card connector on the circuit board to a third card connector on the mounting portion (for example, see element 67, Fig 10, see column 3, lines 1-50).

Regarding claim 5, Wang et al discloses a routing portion comprising a first riser for coupling with the second card connector on the circuit board; and a second riser coupled with the first riser, the second riser for coupling with the mounting portion (for example, see element 67, Fig 7, 10).

Regarding claim 6, Wang et al discloses a first riser and the second riser comprising a single part (for example, see element 67, Fig 7, 10).

Regarding claim 7, Wang et al discloses a first riser oriented substantially transverse to a circuit board and the second riser oriented substantially parallel to the circuit board (for example, see element 67, Fig 7, 10).

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Regarding claim 8, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing in computer systems and is merely a matter of design choice by the applicant (see Wang et al).

Regarding claim 9, Wang et al discloses an assembly comprising:

- a circuit board; a processor disposed on the circuit board; a chip set disposed on the circuit board and coupled to the processor a first card connector disposed on the circuit board and coupled to the chip set by at least one signal line, a second card connector disposed on the circuit board and coupled to the chip set by at least one signal line (for example, see Figs 2,7 see column 2, line 37- column 3, line 50)
- a mounting portion secured in the first card connector on the circuit board, the mounting portion including a first communication path to couple the at least one signal line of the first card connector on the circuit board to a first card connector disposed on the mounting portion ;(for example, see elements 10B, 12A, Fig 7)
- a routing portion secured in the second card connector on the circuit board, the routing portion including a communication path to couple the at least one signal line of the second card connector on the circuit board to the mounting portion (for example, see element 67, Fig 7)
- a second communication path of the mounting portion to couple the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the mounting portion (for example, see element 67,12C Fig 7, see column 3, lines 1-50).

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Regarding claim 10, Wang et al discloses a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 11, Wang et al discloses the mounting portion to orient the peripheral card substantially parallel to the circuit (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 12, Wang et al discloses the signal lines being GNT# line and REQ# lines (for example, see column 2, lines 37-60).

Regarding claim 13, Wang et al discloses the mounting portion and the routing portion comprising a single integrated component (for example, see element 67, Fig 7, 10).

Regarding claim 14, Wang et al discloses a third card connector disposed on a circuit board and coupled to the chip set by at least one signal line, at least one other routing portion secured in the third card connector on the circuit board, the at least one other routing, portion including a communication path to couple the at least one signal line of the third card connector on the circuit board to the mounting portion, a third communication path of the mounting portion to couple the at least one signal line of the third card connector on the circuit board to a third card connector disposed on the mounting portion (for example, see element 67, Fig 10, 2, see column 3, lines 1-50).

Regarding claim 16, Wang et al discloses a routing portion comprising a first riser coupled with the second card connector on the circuit board, and a second riser coupled with the first riser, the second riser coupled with the mounting portion (for example, see element 67, 68, 10B Fig 7).

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Regarding claim 17, Wang et al discloses a first riser and the second riser comprising a single part (for example, see element 67, Fig 7).

Regarding claim 18, Wang et al discloses a first riser oriented substantially transverse to a circuit board and the second riser oriented substantially parallel to the circuit board (for example, see element 67, Fig 7).

Regarding claim 19, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing and is merely a matter of design choice by the applicant.

Regarding claim 20, Wang et al discloses a first card connector on the circuit board separated from the second card connector on the circuit board by at least one intervening card connector disposed on the circuit board (for example, see Figs 2,7,12,17).

Regarding claim 21, Wang et al discloses an assembly comprising:

- a chassis, a circuit board disposed in the chassis; a processor disposed on the circuit board; a chip set disposed on the circuit board and coupled to the processor a first card connector disposed on the circuit board and coupled to the chip set by at least one signal line, a second card connector disposed on the circuit board and coupled to the chip set by at least one signal line (for example, see Figs 2,7 see column 1, lines 1-27, see column 2, line 37- column 3, line 50)
- a mounting portion secured in the first card connector on the circuit board, the mounting portion including a first communication path to couple the at least one

signal line of the first card connector on the circuit board to a first card connector disposed on the mounting portion ;(for example, see elements 10B, 12A, Fig 7)

- a routing portion secured in the second card connector on the circuit board, the routing portion including a communication path to couple the at least one signal line of the second card connector on the circuit board to the mounting portion (for example, see element 67, Fig 7)
- a second communication path of the mounting portion to couple the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the mounting portion (for example, see element 67, 12C Fig 7, see column 3, lines 1-50).

Regarding claim 22, Wang et al discloses a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 23, Wang et al discloses the mounting portion to orient the peripheral card substantially parallel to the circuit (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 24, Wang et al discloses the signal lines being GNT# line and REQ# lines (for example, see column 2, lines 37-60).

Regarding claim 25, Wang et al discloses the mounting portion and the routing portion comprising a single integrated component (for example, see element 67, Fig 7, 10).

Regarding claim 26, Wang et al discloses a third card connector disposed on a circuit board and coupled to the chip set by at least one signal line, at least one other routing

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portion secured in the third card connector on the circuit board, the at least one other routing, portion including a communication path to couple the at least one signal line of the third card connector on the circuit board to the mounting portion, a third communication path of the mounting portion to couple the at least one signal line of the third card connector on the circuit board to a third card connector disposed on the mounting portion (for example, see element 67, Fig 10, 2, see column 3, lines 1-50).

Regarding claim 28, Wang et al discloses a routing portion comprising a first riser coupled with the second card connector on the circuit board, and a second riser coupled with the first riser, the second riser coupled with the mounting portion (for example, see element 67,68,10B Fig 7).

Regarding claim 29, Wang et al discloses a first riser and the second riser comprising a single part (for example, see element 67, Fig 7).

Regarding claim 30, Wang et al discloses a first riser oriented substantially transverse to a circuit board and the second riser oriented substantially parallel to the circuit board (for example, see element 67, Fig 7).

Regarding claim 31, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing in computer systems and is merely a matter of design choice by the applicant (see Wang et al).

Regarding claim 32, Wang et al discloses a first card connector on the circuit board separated from the second card connector on the circuit board by at least one intervening card connector disposed on the circuit board (for example, see Figs 2,7,12,17).

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Regarding claim 33, Wang et al discloses an apparatus comprising:

- first routing means including a first communication means for routing at least one signal line from a first card connector on a circuit board to a first card connector disposed on the first routing means (for example, see elements 10B, 51A, 12A Fig 7)
- second routing means including a communication means, the communication means of the second routing means for routing, at least one signal line from a second card connector on the circuit board to the first routing, means (for example, see element 67,68, Fig 7)
- a second communication means of the first routing means to route the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the first routing means (for example, see element 67, 12C, Fig 7)

Regarding claim 34, Wang et al discloses the assembly further comprising a third routing means including a communication means for routing at least one signal line from a third card connector on the circuit board to the first routing means, a third communication means of the first routing means to route the at least one signal line of the third card connector on the circuit board to a third card connector disposed on the first routing means (for example, see element 67, Fig 10, see column 3, lines 1-50).

Regarding claim 35, electrical or optical signals are conventionally routed by communicating means during the operation of a computer assembly and is merely a functional recitation of the communicating means.

Regarding claim 40, Wang et al discloses wherein each of the first and second communication paths of the mounting portion and the communication path of the routing portion comprises an electrically conductive path (for example, see column 3, lines 1-50).

Regarding claim 41, an optical path used as a communication path is seen as an alternate means for signal transmission and is seen as a mere matter of design choice.

Regarding claim 42, Wang et al discloses wherein each of the first and second communication paths of the mounting portion and the communication path of the routing portion comprises an electrically conductive path (for example, see column 3, lines 1-50).

Regarding claim 43, an optical used as a communication path is seen as an alternate means for signal transmission and is seen as a mere matter of design choice.

Regarding claim 44, Wang et al discloses wherein each of the first and second communication paths of the mounting portion and the communication path of the routing portion comprises an electrically conductive path (for example, see column 3, lines 1-50).

Regarding claim 45, an optical used as a communication path is seen as an alternate means for signal transmission and is seen as a mere matter of design choice.

Regarding claim 46, Wang et al discloses an apparatus comprising:

- a circuit board; a first card connector disposed on the circuit board and having at least one signal line extending therefrom (for example, see elements 50,51A, Fig 7)

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- a second card connector disposed on the circuit board and having at least one signal line extending therefrom (for example, see element 68, Fig 7)
- a mounting portion secured in the first card connector on the circuit board, the mounting portion including a first communication path to couple the at least one signal line of the first card connector on the circuit board to a first card connector disposed on the mounting portion;(for example, see elements 10B, 12A, Fig 7)
- a routing portion secured in the second card connector on the circuit board, the routing portion including a communication path to couple the at least one signal line of the second card connector on the circuit board to the mounting portion (for example, see element 67, Fig 7)
- a second communication path of the mounting portion to couple the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the mounting portion (for example, see element 67,12C Fig 7, see column 3, lines 1-50).

Regarding claim 47,Wang et al discloses a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 48,Wang et al discloses a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 49, Wang et al discloses the mounting portion to orient the peripheral card substantially parallel to the circuit (for example, see elements 12 A- C, Figs 2-13, see column 1, lines 1-28).

Regarding claim 50, Wang et al discloses the mounting portion and the routing portion comprising a single integrated component (for example, see element 67, Fig 7, 10).

Regarding claim 52, Wang et al discloses a routing portion comprising a first riser coupled with the second card connector on the circuit board, and a second riser coupled with the first riser, the second riser coupled with the mounting portion (for example, see element 67, 68, 10B Fig 7).

Regarding claim 53, Wang et al discloses a first riser and the second riser comprising a single part (for example, see element 67, Fig 7).

Regarding claim 54, Wang et al discloses a first riser oriented substantially transverse to a circuit board and the second riser oriented substantially parallel to the circuit board (for example, see element 67, Fig 7).

Regarding claim 55, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing in computer systems and is merely a matter of design choice by the applicant (see Wang et al).

Regarding claim 56, Wang et al discloses a first card connector on the circuit board separated from the second card connector on the circuit board by at least one intervening card connector disposed on the circuit board (for example, see Figs 2, 7, 12, 17).

Regarding claim 57, Wang et al discloses wherein each of the first and second communication paths of the mounting portion and the communication path of the routing portion comprises an electrically conductive path (for example, see column 3, lines 1-50).

Regarding claim 58, an optical path used as a communication path is seen as an alternate means for signal transmission in computer systems and is seen as a mere matter of design choice.

Regarding claims 36-39, the methods disclosed therein are deemed as inherent in the assembly and operation of the claimed apparatus of the preceding claims as fully met by the accompanying reference, (Wang et al) and are subsequently rejected.

Allowable Subject Matter

Claims 4,15,27,51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E Levi whose telephone number is (703) 305-0426. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on (703) 308-3121. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0058.

Dameon E Levi
Examiner
Art Unit 2841

DEL
May 22, 2003

A handwritten signature in black ink, appearing to read 'D E M', is positioned above the printed name of David Martin.

DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800